

# Lecture Module - Electrical Instruments

ME3023 - Measurements in Mechanical Systems

Mechanical Engineering

Tennessee Technological University

## Topic 3 - Measuring Time Varying Signals

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- Using a Function Generator
- Using an Oscilloscope
- Pros, Cons, and Pitfalls
- Activity

# Using a Function Generator

- Primary Purpose:



- Limitations:



# Using a Function Generator



## Using an Oscilloscope

- Primary Purpose:

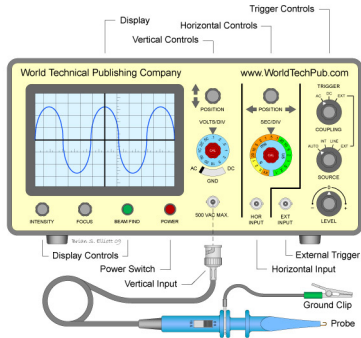


- Limitations:

# Using an Oscilloscope



# Using an Oscilloscope



# Pros, Cons, and Pitfalls

## Function Generator:



Pros:

Cons:

Pitfalls:



# Pros, Cons, and Pitfalls



**Oscilloscope:**

Pros:

Cons:

Pitfalls:

## Activity

Activity: Wire the system on the next slide to accomplish the following:

- 1 Generate a sinusoidal signal  $y(t)$  using the function generator
- 2 Measure and display the signal  $y(t)$  using the oscilloscope
- 3 Measure the amplitude of the signal  $y(t)$  using the multimeter

# What is a Breadboard Common Types Pros, Cons, and Pitfalls Examples

## Activity

Activity:

